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BRAKE BANDS FOR AN AUTOMATIC TRANSMISSION AND METHOD FOR
CONTROLLING A GEAR SHIFT IN AUTOMATIC TRANSMISSION AND
FEEDBACK LOOP CONTROL SYSTEM

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ABSTRACT OF THE DISCLOSURE

A brake band shifting mechanism for an automatic transmission. The brake band shifting mechanism includes a brake band encircling a brake drum of the transmission. A first end of the brake band is mounted to a secured portion of the transmission by a first linkage and a second end of the brake band is mounted to a two-stage servo by a second linkage. The servo provides selective apply and release pressure to the second linkage to control the compression or expansion of the brake band. In operation, the brake band is quickly compressed to the brake drum during the first stage of the servo, and then fine adjustments are made to control the speed of the brake drum during the second stage of the servo, where inputs from position and speed sensors in the transmission are used to control the adjustment of the brake band.

10016472-121001

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